

EXHIBIT B

**Exhibit B**  
**U.S. Application No. 09/509,283**  
**Marked Up Copy of Amended Claims**

71. (Twice amended) A monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
wherein the human 8F4 polypeptide is recognized by the antibody deposited with the Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH ("DSMZ") and assigned accession no. DSM ACC2539;  
and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates human T lymphocytes.

76. (Twice amended) A monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;  
and wherein the monoclonal antibody inhibits a biological activity of the human 8F4 polypeptide.

78. (Twice amended) A hybridoma that produces a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;  
and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates human T lymphocytes.

83. (Twice amended) A hybridoma that produces a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;

and wherein [said hybridoma produces a] the monoclonal antibody [that] inhibits a biological activity of the human 8F4 polypeptide.

85. (Twice amended) A pharmaceutical composition comprising a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

a) is an inducible T cell costimulatory molecule;

b) occurs on two-signal-activated human T lymphocytes;

c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and

d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;  
and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates human T lymphocytes.

86. (Twice amended) A pharmaceutical composition comprising a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

a) is an inducible T cell costimulatory molecule;

b) occurs on two-signal-activated human T lymphocytes;

c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and

d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;  
and wherein the monoclonal antibody inhibits a biological activity of the human 8F4 polypeptide.

89. (Amended) The monoclonal antibody of Claim 71 or 76, wherein said monoclonal antibody recognizes the human 8F4 polypeptide of about 55 kilodaltons to 60 kilodaltons, as determined by non-reducing SDS-PAGE.

90. (Amended) The monoclonal antibody of Claim 71 or 76, wherein said monoclonal antibody recognizes the peptide chain of about 27 kilodaltons, as determined by reducing SDS-PAGE.

91. (Amended) The monoclonal antibody of Claim 71 or 76, wherein said monoclonal antibody recognizes the peptide chain of about 29 kilodaltons, as determined by reducing SDS-PAGE.

92. (Amended) The monoclonal antibody of Claim 71 or 76, wherein said monoclonal antibody recognizes a human 8F4 polypeptide present on activated human CD4<sup>+</sup> T lymphocytes and activated human CD8<sup>+</sup> T lymphocytes.

93. (Amended) The hybridoma of Claim 78 or 83, wherein said hybridoma produces a monoclonal antibody that recognizes the human 8F4 polypeptide of about 55 kilodaltons to 60 kilodaltons, as determined by non-reducing SDS-PAGE.

94. (Amended) The hybridoma of Claim 78 or 83, wherein said hybridoma produces a monoclonal antibody that recognizes the peptide chain of about 27 kilodaltons, as determined by reducing SDS-PAGE.

95. (Amended) The hybridoma of Claim 78 or 83, wherein said hybridoma produces a monoclonal antibody that recognizes the peptide chain of about 29 kilodaltons, as determined by reducing SDS-PAGE.

96. (Amended) The hybridoma of Claim 78 or 83, wherein said hybridoma produces a monoclonal antibody that recognizes a human 8F4 polypeptide present on activated human CD4<sup>+</sup> T lymphocytes and activated human CD8<sup>+</sup> T lymphocytes.

97. (Twice amended) A method of producing a human 8F4 polypeptide-specific monoclonal antibody, comprising: culturing an antibody-secreting hybridoma

obtained by fusion of a myeloma cell line cell with a spleen cell of a mouse immunized with an antigen comprising a human 8F4 polypeptide, wherein said human 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,  
and wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;  
such that the monoclonal antibody is produced.